0002653

CORRES. CONTROL
OUTGOING LTR NO.

DOE ORDER# 5400.1
94 RF 09726

DIST.	LTR	ENC
AMARAL, M.E.		
BURLINGAME, A.H.		
BUSBY, W.S.	X	X
BRANCH, D.B.		
CARNIVAL, G.J.		
DAVIS, J.G.		
FERRERA, D.W.		
FRAY, R.E.		
GEIS, J.A.		
GLOVER, W.S.		
GOLAN, P.M.		
HANNI, B.J.		
HARMAN, L.K.		
HEALY, T.J.		
HEDAHL, T.		
HILBIG, J.G.		
HUTCHINS, N.M.		
JACKSON, D.T.		
KELL, R.E.		
KUESTER, A.W.		
MARX, G.E.		
McDONALD, M.M.		
McKENNA, F.G.		
MONTROSE, J.K.		
MORGAN, R.V.		
POTTER, G.L.		
PIZZUTO, V.M.		
RISING, T.L.		
SANDLIN, N.B.		
SCHWARTZ, J.K.		
SETLOCK, G.H.		
STEWART, D.L.		
STIGER, S.G.		
TOBIN, P.M.		
VOORHEIS, G.M.		
WILSON, J.M.		
R. Konwinski	X	X
E. Mogel	X	X
J. McLaughlin	X	X
CORRES. CONTROL	X	X
ADMIN RECORD/080	X	X
TRAFFIC		
WATS/T130G		

CLASSIFICATION:

UCNI		
UNCLASSIFIED		
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER SIGNATURE
DOCUMENT CLASSIFICATION REVIEW WAIVER PER CLASSIFICATION OFFICE
DATE

IF REPLY TO RFP CC NO:

ACTION ITEM STATUS
PARTIAL/OPEN
CLOSED
ADMIN APPROVALS:

ORIG. & TYPIST INITIALS
RJM: bll

EG&G ROCKY FLATS

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September 26, 1994 94-RF-09726

Scott R. Grace
Environmental Restoration Division
DOE/RFFO

RATIONALE FOR THE DISCONTINUANCE OF EXTENDED OPERATIONS AT THE SOIL VAPOR EXTRACTION (SVE) DEMONSTRATION SITE – WSB-096-94

Action: Request operations at SVE Demonstration Site be terminated

The current fiscal year 1995 (FY95) work package for the Site 1 demonstration, contains funding for three months of extended operations. However, we believe it would be prudent to cease this activity as soon as possible. The remediation that this project offers is ineffective (as explained below) and costly ($12,000 per week). Additionally, both the site and the equipment will be needed for other demonstration projects.

The attached SVE operations graph as well as the data show the relationship between the gas flow rates, the concentration in the off gas, and the mass removal rate. Flow rates have increased during the summer, however, concentrations have decreased. Consequently, the mass removal rate has remained constant at approximately 1 lb/hr, as shown on the Cumulative Pounds of VOC Removed Over Time graph. Considering this removal rate and the calculated mass of volatile organic compounds (VOCs) in Individual Hazardous Substance Site 110 (22,000 pounds), it would take approximately 140 weeks to remediate one quarter of the trench. It is likely that the rate would drop as the mass in the trench decreases; therefore, the estimated time frame would increase.

Extended SVE Operations has a cost of approximately $12,000 per week for 35 operational hours. This equates to 35 pounds of recovered VOCs at a cost of $342 per pound or $2000 per gallon. We see no benefit to extended operations and accordingly we request that you discuss with the regulatory community our proposal to terminate extended operations.

W. S. Busby
Manager
Operable Unit 2 Closure

RJM:bll

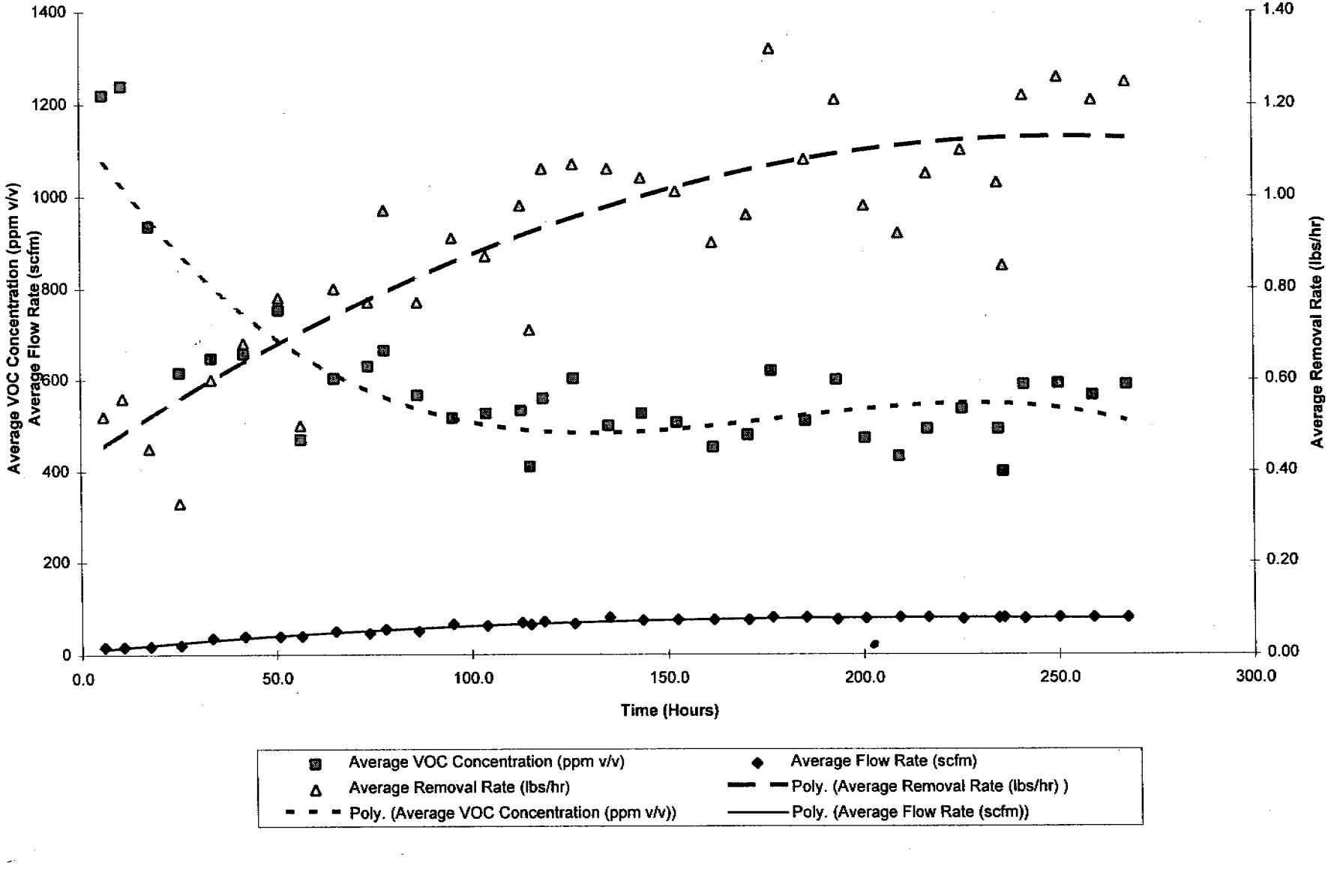
cc:
original and 1 cc - S. R. Grace

Attachments:
As Stated (2)

cc:
E. A. Dille - Aguirre Engineering

ADMIN RECORD
BZ-A-00237

SVE Operations



Cumulative Hours of Operation (hours)	Average VOC Concentration (ppm v/v)	Average Flow Rate (scfm)	Average Removal Rate (lbs/hr)	Pounds of VOCs Removed (lbs)
5.8	1220	16	0.52	3
10.6	1240	17	0.56	5.7
17.4	935	18	0.45	8.7
25.2	615	20	0.33	11.2
33.5	647	35	0.60	16.2
41.8	657	39	0.68	21.8
50.8	753	39	0.78	28.8
56.3	470	40	0.50	31.5
64.9	603	50	0.80	38.4
73.5	630	46	0.77	45
77.7	665	55	0.97	49.1
86.2	567	51	0.77	55.6
95.2	517	66	0.91	63.8
103.8	527	62	0.87	71.3
112.7	533	69	0.98	80
115.0	410	65	0.71	81.6
118.3	560	71	1.06	85.1
126.1	603	67	1.07	93.5
134.9	500	80	1.06	102.9
143.4	527	74	1.04	111.7
152.4	507	75	1.01	120.8
161.8	453	75	0.90	129.3
170.7	480	75	0.96	137.8
176.8	620	80	1.32	145.8
185.3	510	80	1.08	155
193.2	600	76	1.21	164.6
200.5	473	78	0.98	171.8
209.3	433	80	0.92	179.9
216.6	493	80	1.05	187.5
225.5	537	77	1.10	197.3
234.7	493	79	1.03	206.8
236.0	400	80	0.85	207.9
241.3	590	78	1.22	214.4
250.0	593	80	1.26	225.4
258.8	567	80	1.21	236
267.5	590	80	1.25	246.9

Cumulative Pounds of VOCs Removed Over Time